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THE INTERNATIONAL RESEARCH COUNCIL AND  
THE INTERNATIONAL ASTRONOMICAL UNION

BY W. W. CAMPBELL

The search for the truth in the leading departments of knowledge, especially in the domain of fundamental science, and chiefly in astronomy, has made desirable and necessary many international societies or committees for coöperation in research. These organizations reached considerable numbers late in the nineteenth century and early in the twentieth. In astronomy, for example, there were the *Astronomische Gesellschaft*, the Committee on the *Carte du Ciel*, the International Union for Coöperation in Solar Research, the International Geodetic Association, and many somewhat similar but less formally constituted bodies or committees dealing with transit of *Venus* phenomena, with celestial photography, with the fundamental determination of star positions, with astronomical ephemerides, with the reform of the calendar, etc.

In the sciences other than astronomy and seismology, international organizations for coöperation in research have been relatively few, but the usefulness of such bodies of investigators has been abundantly established.

The war of 1914-18, brought on by the governments of Germany and Austria-Hungary—with the sympathy and support of their subjects—and the inhumanity and barbarity with which the war was conducted, destroyed the usefulness of nearly all of the international organizations referred to. The scientists of the allied and associated nations were unable to subscribe to the Prussian view that *might is right* in international relations, and, with very few exceptions, they were of the opinion that personal relationships with the scientists of the central nations should not be resumed<sup>1</sup>, at

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<sup>1</sup>"Inasmuch as the *San Francisco Chronicle* of September 27th misquoted and exaggerated my statement on this subject made to the faculty and students of the University of California on September 26th, it seems desirable to quote from the written address what I really did say on that occasion: "More than a year ago the scientists of France unanimously declared that they would take no part in scientific associations which should include the German scientists, at least until the central nations shall have repudiated the international political methods which have roused

least until the offending governments and peoples shall have renounced their past, and apparently present, political methods. It should not be overlooked or forgotten that most investigators in pure science in the central nations are officials of their governments as truly as are their diplomats, their soldiers, and their sailors. The great majority of German professors, for example, were appointed, promoted, and in case of necessity disciplined, by their Kultus Ministerium, a definite department of their government.

In order to study the questions arising from the unfortunate international situation and to seek a practicable solution, there met in London in October, 1918, under the auspices of the Royal Society, thirty-six delegates representing the national academies or other similar societies of nine allied and associated governments. In brief, it was unanimously decided to withdraw from the very few international societies concerned, in accordance with the statutes or rules peculiar to each case, and to form new associations. A formal statement of the reasons which governed this momentous decision, as prepared and unanimously adopted by the conference, was reprinted in these PUBLICATIONS, **30**, 332-3, 1918; it is worthy of a second reading. The conference appointed a commission to prepare a general plan for the proposed international organizations. This commission made progress at its meeting in Paris in November, 1918.

The American delegates to the London conference had proposed that all the affected organizations relating internationally to one and the same subject, to astronomy, for example, should be succeeded by a single society, so formulated as to serve the purposes of all the associations from which they should withdraw. This policy was adopted.

It was later decided that representatives of the various sciences should meet in Brussels in July, 1919, to create international unions representing many different sciences, and to complete the organization of the International Research Council, whose principal functions relate to the promotion of research in any and all of its

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the indignation of the civilized world.' This sentiment was widespread thruout the allied and associated nations. (See Declaration of Interallied London Conference, *C. R. Académie des Sciences* for October 21, 1918, and *Publ. A. S. P.*, XXX, 332-3, 1918.) Are any of us inclined to criticize the French decision? Let him whose war sufferings have equalled those of the French throw the first stone! I know of a few American and British scientists who say we should renew personal relationships with the scientists of the central nations as soon as peace shall have been concluded; just as if the terrible war had not occurred, just as if the central nations had inflicted a mere football game upon the allied nations. I have been unable to avoid noticing that, of these very few scientists who would immediately renew personal relations with the Germans, not one had a son who was in a German poison-gas attack!"

aspects in any membership country, and especially to the coördinating of the proposed unions representing the several sciences. Altho the Council would in form be the parent and higher organization, its real office would be to serve and not to rule.

The National Academy of Sciences in each country, or its nearest equivalent, was requested to arrange for the sending of delegates to the Brussels meeting. The American delegation was organized under the auspices of the National Research Council, acting for the Academy. The Council's procedure to this end was most interesting, and worthy of careful notice and appreciation. It was vitally concerned that the American delegations should be truly representative of their respective sciences in this country; in astronomy, for example, no investigator and no institution, if up to standard, should find the avenue to appropriate representation closed. The astronomical delegation would be chosen by a subsidiary organization known as the American Section of the (proposed) Astronomical Union, and the American Section, at least for the present occasion, would be constituted as follows:

5 members from the National Academy of Sciences,  
18 members from the American Astronomical Society,  
3 members from the American Mathematical Society,  
3 members from the American Physical Society,  
1 member from the U. S. Naval Observatory,  
1 member from the U. S. Coast Survey.

The American Section thus constituted held its first meeting in the office of the National Research Council, Washington, D. C., on March 8, 1919. About twenty of the thirty-one members of the Section were present. Mr. W. W. Campbell was appointed permanent chairman of the Section, with Messrs. C. G. Abbot, E. W. Brown, Frank Schlesinger, and Joel Stebbins as the other members of the executive committee. The Section gave assent to the actions of the London Conference and formally approved the proposal that those nations which had been neutral thruout the war should be admitted into the International Astronomical Union on the conclusion of peace. The Section did not consider seriously or extensively the form of organization which would promise the greatest usefulness for the proposed Astronomical Union, but concerned itself largely with the technical work of the Union in which the American astronomers would be chiefly interested. The Executive Committee was instructed to appoint sub-committees of the American Section which should prepare reports upon nineteen

prominent divisions of astronomical research, for presentation at a later meeting of the Section. The Brussels delegation was selected in part, and the Executive Committee was authorized to complete it.

The delegation was eventually composed as follows:

W. W. Campbell, Lick Observatory, Chairman; W. S. Adams, Mount Wilson Observatory; Benjamin Boss, Dudley Observatory, Albany; Major Philip Fox, Dearborn Observatory, Eyanston, at that time with the American Expeditionary Forces in France; S. A. Mitchell, McCormick Observatory, Virginia; Frank Schlesinger, Allegheny Observatory, Pittsburgh; C. E. St. John, Mount Wilson Observatory; F. H. Seares, Mount Wilson Observatory; Joel Stebbins, University of Illinois, Secretary.

The American Section met again in the office of the National Research Council on June 23rd and 24th, to receive and act upon the reports of the nineteen sub-committees, to consider questions of policy, and to instruct the delegation which would represent the Section at Brussels. The reports of the sub-committees, presenting the aspects of their subjects which are now prominent in the minds of astronomers, and suggesting procedure for the immediate future, were of a high order of excellence, and the discussions, conducted with enthusiasm and frankness, were extremely interesting and valuable.

A joint meeting with the American Section of the proposed International Geophysical Union (Major Wm. Bowie, Chairman) was held on the afternoon of June 23rd.

Under the direct auspices of the National Research Council, the American delegation to the meetings of the International Research Council at Brussels was appointed, with W. W. Campbell as Chairman. Other members were the scientific attachés in the American Embassies at Paris, London, and Rome, and the chairman of the American delegations representing the sciences other than astronomy.

The delegation of astronomers, accompanied by Mrs. Campbell, sailed from New York on June 30th and reached London on July 7th. The next ten days were devoted profitably and with unusual pleasure to renewing old acquaintances and making many new ones, to learning of progress in astronomy and related sciences in Great Britain made during the war period, to discussing with our British colleagues the many problems coming up for consideration at the Brussels meeting, etc. The President and Council of

the Royal Astronomical Society had most kindly cabled to Washington a request that the members of the American delegation attend and address a special meeting of the Society on the afternoon of July 11th. This invitation was accepted. At the meeting, under the presidency of Professor Fowler, each member of our astronomical delegation, and likewise Dr. L. A. Bauer of the Geophysical delegation, addressed the Society informally on the astronomical subject which at this time especially interested him. This meeting had been preceded by a reception in the rooms of the Society, which gave opportunity to meet many British men and women whose names had long been familiar. Last, but far from least, the Royal Astronomical Society Club entertained the Americans in attendance at a dinner immediately following the meeting of the Society. The dinner was delightfully presided over by Professor Glaisher of Trinity College, Cambridge, who was ably assisted in making the introductions by Messrs. Dyson, Turner, Newall, and others. All members of the American delegation responded to toasts.

The delegation was cordially received at luncheon in the celebrated Greenwich Tower Room by the Astronomer Royal and Lady Dyson, and it was apparent that we were constantly in their thoughts during our stay in England.

The Americans were graciously invited to spend the week-end with friends at Cambridge, Oxford, and elsewhere.

Opportunities to observe the equipment and work of the Royal Observatory, of the observatories at Cambridge and Oxford, and of the laboratory of Professor Fowler in South Kensington were provided by members of their staffs.

In common with many British colleagues, the American delegation journeyed from London to Brussels on July 17th. The proceedings began on the following morning, at a meeting of the International Research Council, at which all delegates were present, with Albert, King of the Belgians, occupying the royal box. The opening of the session had been delayed a few minutes while the king, in an adjoining room, received the chairman of the delegation from each of the principal allied countries. The number of accredited delegates exceeded two hundred: one hundred and one from Belgium, two from Canada, twenty-seven from America, forty-five from France, eighteen from Great Britain, fifteen from Italy, one from New Zealand, one from Poland, two from Rumania, and two from Serbia.

Each week day from July 18th to July 28th inclusive was occupied with sessions of the International Research Council or of the affiliated organizations representing the individual sciences, together with meetings of executive and other committees. The work of the first seven days related chiefly to the construction and adoption of constitutions. The election of officers and the appointing of committees took place on the eighth and ninth days.

At the final session of the Research Council a formal invitation was extended to the scientists of the countries which had remained neutral in the war to participate in the work of the Council and of the international unions representing the several sciences.

Picard of France was elected president of the International Research Council, and Schuster of Great Britain was elected general secretary. Other elected members of the executive committee are Hale of America, Lecointe of Belgium, and Voltera of Italy. These five constitute the administrative Bureau of the Committee. The completion of the executive committee was held in abeyance until the more precise relationships of the Council and the affiliated unions shall have been determined. It is probable that the committee will consist of at least twelve members. The city of Brussels was selected as the legal home of the Council.

The most difficult question confronting the International Astronomical Union related to its composition. Should it be organized as a great astronomical society, comprehending all divisions of astronomical science in a somewhat general or indefinite manner, or should it consist of working committees, each committee concerned with some definite line of astronomical research? Should there, for example, be a great division of the Union relating to the solar system, or, on the contrary, several comparatively small committees occupying themselves respectively with such definite subjects as solar rotation, eclipses, solar radiation, etc.? The latter plan was adopted. To start with, thirty-two committees were established. These vary in size in accordance with the requirements and state of the problem concerned. The committee on the Carte du Ciel and the committee on Meridian Astronomy are relatively large, with more than a dozen members each, whereas other committees, such as those on Lunar Nomenclature, on Solar Radiation, on Astronomical Ephemerides, etc., are relatively small, with not more than half a dozen members each. The separate committees are working bodies. They are intended to be essentially

complete in themselves. The Union as a whole will meet in general every three years in different educational centers of the world, but it is expected that the members of a given committee will find many occasions between general meetings when conferences by letter or otherwise may profitably occur. Committee reports will doubtless aim to represent the view of the committees as to the current status of their subjects, and to present suggestions for further undertakings. In other words, it is anticipated that each committee shall make known, thru its report presented at a general meeting of the Union, those aspects of its subject with which the workers in that subject can most profitably acquaint and busy themselves.

Each committee has power to add to its numbers, by favorable vote of two-thirds of the present membership of the committee, subject to approval by the Executive Committee of the Union.

It is provided in the Constitution that the committees shall automatically go out of existence at the close of each triennial meeting of the Union. This offers the opportunity for reorganizing upon the basis of those who work.

Monsieur Baillaud, Director of the Paris Observatory, was elected First President of the International Astronomical Union, and Professor Alfred Fowler, of South Kensington, London, General Secretary. Lecointe of Belgium, Ricco of Italy, Dyson of Great Britain, and Campbell of America, were selected as four of the five Vice-Presidents. The President, the Vice-Presidents, and the General Secretary compose the Executive Committee.

It was decided that the next meeting of the Astronomical Union should be held at Rome in 1922.

Certain of the working committees, such as those on eclipses, on time, etc., held meetings in Brussels promptly following their formation. It was deeply regretted that the work of organization was so time-consuming as to prevent nearly all of the committees from holding first meetings.

The earnestness and enthusiasm with which the work of organization was conducted, and the unanimity with which decisions were finally made, are the satisfactory indications that the Union will meet efficiently its purpose of promoting astronomical research, thru the coördinated efforts of the astronomers in many countries.

The Constitution of the International Astronomical Union will be published in this journal as soon as practicable following receipt of the official copy.

The International Geophysical Union, organized simultaneously by strong delegations from the larger countries, is composed of divisions concerned with seismology, vulcanology, terrestrial magnetism, the form and dimensions of the Earth, etc.

Other unions relate to chemistry, biology, physics, bibliography, etc.

All of the meetings were held in the splendid building of the Brussels Academy of Sciences.

The personal side of the Brussels meeting, as on all such occasions, was valuable. In addition to chance or informal groupings of delegates at the hotel where the greater number lived, there were delightful hospitalities in the homes of leading scientists of Brussels, and formal receptions by Mayor Max and the Council of Brussels and by Ministers of the Belgian State. A reception at the Royal Observatory by Director and Madame Lecointe should be specially mentioned. The members of the Observatory staff provided full opportunity for the large number of guests to see the many interesting features of the institution.

The two Sundays in Brussels were utilized by many delegates to visit Louvain, Dinant, and other places made famous by Kultur.

Following the work in Brussels, en route to London or Paris, several members of the American and British parties visited together the Bruges and Zeebrugge region, and the Ypres and Somme battlefields, under the splendid conductorship of Colonel F. J. M. Stratton, astronomer in the Cambridge Astrophysical Observatory, who had served more than four years in the thick of the war, chiefly in the Ypres and Somme areas. Not many visitors to the battlefields will be privileged to see them, as we saw them, by virtue of Stratton's enthusiasm and knowledge.

A few members of the American party went to Paris, where they were hospitably received by Director and Madame Baillaud of the Observatory, and others. Many interesting subjects engaged their attention at the Observatory, at the Eiffel Tower (under General Ferrié's enthusiastic and able leadership), at the Academy of Sciences, and at the Bureau of Longitudes.

It was, of course, not possible for us to forget, on any of our days in England, Belgium, and France, that our colleagues had but recently emerged from the dark valley of war; and we were constantly impressed by the courage and the dignity with which they had borne suffering and were now facing the problems of the future.